

Amendments to the Specification:

Please amend the specification as follows:

Please replace paragraph number 0004, with the following rewritten line:

[0004] The drawback of the prior art IEEE 802.3ah is that the upstream traffic from any given ONU may be detectable from other ONU access points due to various unwanted signal reflections. The unwanted signal reflections may not be removed or even noticed from the network beforehand. The problem is further illustrated in Figure 2. An ONU 202 transmits a signal 220 that is to be received exclusively by a HUB 230. Along the transmission path from ONU 202 to HUB 230, there is at least a first fiber 212, an optical splitter 200 and a second fiber 210. Fiber 210 connects to at least two fibers 212 and 214 by means of optical splitter 200. Associated with fiber 210 is also a reflecting element 206; which reflects part of signal 220 as a reflection 222, which is an unwanted reflection. Reflection 222 is in turn split at optical splitter 200 and becomes perceivable at an ONU 204. Reflecting element 206 can be, for instance, a fiber connector, a fiber breaking point, an open fiber end or a second splitter along the fiber path between ONU 202 and HUB 230 220. Reflecting elements where discrete back reflections may occur cause privacy and confidentiality problems in EPONs. The most critical places in EPONs are on the upstream side of the splitter that is closest to the transmitting user.

Please replace paragraph number 0025, with the following rewritten line:

[0025] Signal 220 transmitted from ONU 202 204 is reflected at each of the disturbing reflectors 300, 302 and 304, thereby generating the disturbing reflections 224, 226 and 228 respectively. Transmitted signal 220 may be recoverable from a reflection 222 directly, since no other signals of sufficient intensity are combined with it. From the point of view of this embodiment, reflection 222 can be denoted as an unwanted reflection. However, at reflector 300, reflection 222 combines with a second reflection of the signal 220, which is caused by reflector 300. Due to propagation delay, the second reflection has a time displacement from the reflection 222. Due

to the time displacement, reflection signal 224 that includes reflection 222 and the second reflection is scrambled. The bits of reflection 222 and the second reflection are not aligned in time. Reflection signal 224 is further combined with a reflection of transmitted signal 220 at disturbing reflector 302 thereby generating a reflection signal 226 where signal 224 is further scrambled. Finally, reflection signal 226 is further combined with a reflection of the transmitted signal 220 at the disturbing reflector 304 resulting in a reflection signal 228. When reflection signal 228 is received at ONU 204, original signal 220 is no longer recoverable since reflection signal 228 is a combination of several reflections of original signal 220, each reflection having a different time displacement from the start of signal 220.